

QUATERNARY PALAEOONTOLOGY IN MELANESIA: RECENT ADVANCES

ABSTRACT

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The existence of a Pleistocene marsupial megafaunal assemblage in New Guinea was announced in 1983 (Flannery, Mountain and Aplin, 1983). Since then a total of three macropodid and two diprotodontid species have been described from Pleistocene sediments in New Guinea. These taxa shed some light on the zoogeography and palaeoecology of New Guinea during the Pleistocene.

Two marsupials (*Thylacinus cynocephalus* and *Thylogale christenseni*) have become extinct in New Guinea during the Holocene, and a chiropteran (*Aproteles bulmerae*) has suffered a massive reduction in its range. It seems likely that both climatic and human factors have been responsible for these events.

Recent discoveries of fossil mammals associated with archaeological material on some of the smaller Melanesian islands (New Ireland, Buka, Nissan, Tikopia and Erromanga) have added greatly to knowledge of the region's zoogeography. It is now apparent that the entire marsupial fauna of New Ireland (a wallaby, *Thylogale brunii*, and two cuscuses, *Phalanger orientalis* and *Spilocuscus maculatus*) was introduced, probably by human agency, during the Holocene. All of the extant terrestrial mammal fauna, except one murid (*Melomys rufescens*), is also introduced. However, a native *Rattus* species that was present in Pleistocene times became extinct by the late Holocene, probably as a result of competition with the introduced *R. praetor*. This work, in conjunction with that of Glover (1971) markedly alters thought about the marsupial biogeography of the Moluccas and the Bismarck/Solomon Island groups.

□ *Mammalia, Quaternary, Zoogeography, Melanesia.*

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